



# COSTARGROUT C20

General Purpose, Non-Shrink Precision Grout

## PRODUCT DESCRIPTION

COSTARGROUT - C20 represents a high-strength, non-shrink precision grout formulated with Portland cement, exhibiting exceptional high early and ultimate strengths. Enriched with expansive additives, COSTARGROUT - C20 precision grout necessitates solely the incorporation of water to achieve flowable properties and impressive strengths.

## FEATURES

- Chloride Free
- It is easy to mix and apply
- Non-bleeding /non-segregating
- Non-corrosive/non-chloride/non-metallic
- It is non-shrink and has got positive expansion
- It has good pour ability and flow-ability
- Usable over a wide range of consistencies from dry pack to flow-able
- General Purpose, Non-Shrink Precision grouting fill.

## TYPICAL APPLICATION

Costargrout C20 may be used in many grouting applications such as:

- Grouting under baseplates, columns and equipment not subjected to heavy impact or vibratory loads.
- Base plates and bolt-pockets of turbo generators
- Columns in precast contractions
- Diesel generator sets
- Cement, textile and paper mill machinery
- Steel rolling mill beds
- Crane and transporter rails
- Concrete anchors
- Cavities, gaps and recesses

## MIXING INSTRUCTION

To mix Costargrout C20, most of the mixing water should be added to the mixer first, then add the powder to the water and adjust as needed to achieve the desired consistency. The Costargrout C 20 should be mechanically mixed for a minimum of three minutes. The quantity of clean water required to be added to a 20kg bag to achieve the desired consistency is given below: Flowable:3.6 litres

## APPLICATION

- Surfaces to receive the grout must be clean and free of any type of foreign matter, grease, paint, oil, dust or efflorescence.
- In some Cases, it may be necessary to roughen smooth surfaces or etch old ones with acid.
- The area should be thoroughly flushed and soaked with clean water prior to grouting, leaving no standing water.
- Place the grout quickly and continuously using light rodding to eliminate air bubbles.

## CURING

- When properly mixed to a fluid consistency, the non-shrink grout will comply with ASTM C 1107 and CRD621 retain a fluid consistency for the maximum usable working time of 25 minutes at 50° F (10° C).
- A damp cure of at least 3 days is required to control the non-shrink characteristics and maintain strength levels.



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## TECHNICAL PROPERTIES

Packaging	20kg									
Appearance	Grey/white powder									
Shelf life	12 months from date of production									
Storage condition	Product must be stored in original, unopened, and undamaged sealed packaging in dry condition and temperature between +5 °C and +35 °C.									
<b>Mechanical properties</b>	<b>Engineering data</b>						<b>Setting time</b>			
	<b>Age (Days)</b>		1	3	7	28	Consistence	Trowel-able	Flow-able	
		Consistence								
	<b>Compressive Strength MPa</b>	Stiff	>28	>40	>50	>68	Initial settime	3hrs	4.5hrs	
		Plastic	>24	>35	>44	>59	Final settime	4.5hrs	6.5hrs	
		Flowable	>21	>32	>41	>53	Water ratio	3.2L/20kg	3.6L/20kg	
	<b>Flexural strength MPa</b>	-	-	-	-	>13.8	Tested at 20°C 50% RH Tested to AS 1012.18 for setting times			
	<b>Bond strength MPa</b>	-	-	-	>9.5	>17.5				
	Tested AS 1012.9 and AS2073 at 20°C for compressive strength / Tested to ASTM C348-86 at 20 degrees for flexural strength / Tested to ASTM C882-1987, Slant shear method.									
	Mixing ratio	3.6litres of water per 20kg bag of product								
Fresh-wet-density	Approx. 2200 kg/m <sup>3</sup> (flow-able/pourable)									
Application temp	A minimum 10° C - Maximum 30° C									
<b>TECHNICAL PROPERTIES</b>										
Expansion character	Expansion 1-2% Plastic state									
Time of expansion	Start 15 min Finish 3 hrs (plastic state)									
Pot life	~2 h (23 °C)									
Bleed	0%									
Youngs modulus	25GPa									
Consumption	115 bags/ (m <sup>3</sup> )									
Layer thickness	Min. 10 mm per pour, Max. 75 mm per pour									



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Fresh mortar density	~2.20 kg/l (25 °C)
Ambient air temperature	+5 °C min. / +35 °C max

### STANDARD COMPLIANCE

- CRD-C 621, Corps of Engineers, Specification for Non-Shrink Grout
- ASTM C1107, "Standard Specification for Packaged Dry, Hydraulic-Cement Grout
- Canadian MTQ

### STORAGE AND SHELF LIFE

Protect from freezing, if frozen or crystallized, thaw gradually and stir to homogenous mixture. Shelf life in unopened original containers is 12 months when stored at 70°F (21°C).

### PRECAUTION

COSTAR NON-SHRINK PRECISION GROUT contains hydraulic cement and other carefully selected additives. Normal safety wear such as rubber gloves, dust mask and safety glasses, used to handle conventional cement based products, should be worn. Material Safety Data Sheets are available upon request.

### HEALTH & SAFETY

- Please ensure that hand gloves and goggles are worn during installation
- Apply in ventilated areas, away from flames
- It is only important that during application and after application, standard safety procedures are done.
- Please consult current MSDS for product.
- *For Professional Use only.*

### LEGAL NOTE

The information and recommendations relating to the application of Costarchem products, are given in good faith based on current knowledge and experience of the products when properly stored, handled and applied under normal conditions in accordance with the stated recommendations in the product datasheets. Whilst Costarchem endeavors to ensure that any advice, recommendation, specification of information it may give is accurate and correct, it cannot, because it has no direct or continuous control over where or how its products are applied, accept any liability either directly or indirectly arising from the use of its products, whether or not in accordance with any advice, specification, recommendation of information given by it. The user of the product must test the product's suitability for the intended application and purpose. Costarchem reserves the right to change the properties of its products. The proprietary rights of third parties must be observed. All orders are accepted subject to our current terms of sale and delivery. Users must always refer to the most recent issue of the local Product Data Sheet for the product concerned, copies of which will be supplied on request.

### ADDITIONAL INFORMATION

Costarchem manufactures a complete range of construction chemical products which include:

- Concrete admixtures
- Waterproofing system
- Flooring system
- Cementitious and epoxy precision grouts
- Damp-proofing products
- Sealants and adhesives
- Repair and refurbishment systems

For more information on any of our products, please contact Costarchem global or regional office.